

CLASSIFICATION: UNCLASSIFIED										
BUDGET ITEM JUSTIFICATION SHEET (P-40)									DATE: February 2004	
FY2005 President's Budget										
APPROPRIATION/BUDGET ACTIVITY				P-1 ITEM NOMENCLATURE						
Ship and Conversion, Navy/BA#2 OTHER WARSHIPS				Virginia Class Submarine						
				BLI: 201300						
	PRIOR YEARS	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	TO COMPLETE	TOTAL PROGRAM
QUANTITY	4	1	1	1	1	1	1	2	18	30
End Cost	10616.7	2147.5	2143.7	2245.2	2317.5	2478.6	2593.5	4940.1	45883.1	75365.9
Less Advance Procurement	3158.6	678.9	631.9	600.5	621.9	676.6	696.0	1338.4	13962.2	22364.8
Less Transfer/CTC	1061.1	.0	.0	.0	.0	.0	.0	.0	.0	1061.1
Less EOQ				63.6	143.6	193.3	193.4	.0	2431.1	3025.0
Full Funding	6397.	1468.7	1511.9	1581.1	1552.1	1608.7	1704.0	3601.7	29489.7	48915.
Plus Advance Procurement	4268.5	632.1	604.2	631.9	687.7	1101.5	1349.2	1385.7	11704.1	22364.9
Plus Transfer Authority	304.0	326.7	300.4							931.1
Plus EOQ			253.7	240.	100.1			401.1	2030.	3025.0
Total Obligational Authority	10969.6	2427.4	2670.1	2453.0	2339.9	2710.3	3053.3	5388.5	43223.8	75236.0
Plus Outfitting and Post Delivery	10.7	17.8	25.7	56.6	50.1	52.0	62.0	59.3	2261.1	2595.5
Total	10980.3	2445.3	2695.9	2509.6	2390.1	2762.3	3115.3	5447.9	45484.9	77831.4
Unit Cost (Ave. End Cost)	2654.2	2147.5	2143.7	2245.2	2317.5	2478.6	2593.5	2470.	2549.1	2512.2

NOTE: These VA Class Exhibits reflect a FY04-08 Multi-Year Procurement strategy with EOQ in FY04-06 and FY09.

MISSION: To seek out and destroy enemy ships across a wide spectrum of tactical scenarios, working both independently and in consort with a battle group/other ships, providing Joint Commanders with early, accurate knowledge of the battlefield on which power may be projected from sea; covert striking power against targets ashore; the capability to establish covertly an expeditionary force on land; and the maritime strength to destroy enemy naval forces and interdict seaborne commerce.

<p>Characteristics:</p> <table style="width: 100%;"> <tr> <td style="width: 30%;">Hull</td> <td></td> </tr> <tr> <td>Length overall</td> <td style="text-align: right;">377'</td> </tr> <tr> <td>Beam</td> <td style="text-align: right;">34'</td> </tr> <tr> <td>Displacement</td> <td style="text-align: right;">7830</td> </tr> <tr> <td>Draft</td> <td style="text-align: right;">32'</td> </tr> </table> <p>Armament:</p> <p>Torpedo Tubes</p> <p>Vertical Launch Tubes</p> <p>Major Electronics:</p> <p>Command, Control, Communications and Intelligence System</p> <ul style="list-style-type: none"> - Open System Architecture - Twenty-three Subsystems 	Hull		Length overall	377'	Beam	34'	Displacement	7830	Draft	32'	<table style="width: 100%;"> <tr> <td style="width: 30%;">Production Status:</td> <td style="width: 30%; text-align: center;">FY04</td> <td style="width: 40%; text-align: center;">FY05</td> </tr> <tr> <td>Contract Plans</td> <td style="text-align: center;">SSN 779</td> <td style="text-align: center;">SSN 780</td> </tr> <tr> <td>Award Planned (Month)</td> <td style="text-align: center;">Jan-04</td> <td style="text-align: center;">Jan-05</td> </tr> <tr> <td>Months to Complete</td> <td></td> <td></td> </tr> <tr> <td> a) Award to Delivery</td> <td style="text-align: center;">01/04 - 04/10</td> <td style="text-align: center;">01/05 - 04/11</td> </tr> <tr> <td> b) Construction Start to Delivery</td> <td style="text-align: center;">08/03 - 04/10</td> <td style="text-align: center;">08/04 - 04/11</td> </tr> <tr> <td>Commissioning Date</td> <td style="text-align: center;">May-10</td> <td style="text-align: center;">May-11</td> </tr> <tr> <td>Completion of Fitting Out</td> <td style="text-align: center;">Apr-10</td> <td style="text-align: center;">Apr-11</td> </tr> </table>	Production Status:	FY04	FY05	Contract Plans	SSN 779	SSN 780	Award Planned (Month)	Jan-04	Jan-05	Months to Complete			a) Award to Delivery	01/04 - 04/10	01/05 - 04/11	b) Construction Start to Delivery	08/03 - 04/10	08/04 - 04/11	Commissioning Date	May-10	May-11	Completion of Fitting Out	Apr-10	Apr-11
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EXHIBIT P-5
FY2005 President's Budget
February 2004
BLI: 201300

APPROPRIATION: SHIPBUILDING AND
CONVERSION, NAVY

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P-5)

BUDGET ACTIVITY: 2 P-1 ITEM NOMENCLATURE: NEW SSN
OTHER WARSHIPS

SUBHEAD: 7232/H232/H230

	FY 1998		FY 1999		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005	
ELEMENTS OF COST	QTY	TOT COST	QTY	TOT COST	QTY	TOT COST	QTY	TOT COST	QTY	TOT COST	QTY	TOT COST	QTY	TOT COST
PLAN COSTS	1	1,421,966	1	245,276	1	60,751	1	76,378	1	36,637	1	55,084	1	63,710
BASIC CONST/CONVERSION		1,274,876		1,393,003		1,266,214		1,268,283		1,397,971		1,373,720		1,492,029
TECHNOLOGY INSERTION		0		0		11,499		16,354		0		0		0
ELECTRONICS		274,519		196,227		220,395		234,342		223,935		211,483		211,320
PROPULSION EQUIPMENT		452,000		419,008		430,149		431,200		429,000		430,600		431,337
HM&E		233,572		227,851		172,823		184,030		38,821		52,598		20,179
OTHER COST		25,120		23,037		30,293		27,550		21,162		20,232		26,640
ORDNANCE		0		0		0		0		0		0		0
ESCALATION		0		0		0		0		0		0		0
TOTAL SHIP ESTIMATE		3,682,053		2,504,402		2,192,124		2,238,137		2,147,526		2,143,717		2,245,215
LESS AP FY96		691,589		98,706										
LESS AP FY97		288,140		487,564										
LESS AP FY98				109,655		168,000								
LESS AP FY99						503,195								
LESS AP FY00						144,851		599,624						
LESS AP FY01								67,254		429,000				
LESS AP FY02										249,862		431,109		
LESS AP FY03												200,751		431,337
LESS AP FY04														169,184
LESS EOQ FY04														63,551
LESS:FY01 TRANSFER		77,000												
LESS:FY02 TRANSFER		166,561		60,429										
LESS:FY03 TRANSFER		190,882		135,800										
LESS:FY04 TRANSFER		81,060		156,978		62,372								
LESS:FY05 PENDING CTC				10,000		81,330								
LESS:FY06 PENDING CTC						38,713								
NET P-1 LINE ITEM		2,186,821		1,445,270		1,193,663		1,571,259		1,468,664		1,511,857		1,581,143

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SHIPBUILDING AND CONVERSION, NAVY
SHIP PRODUCTION SCHEDULE

EXHIBIT P-27
FY2005 President's Budget
February 2004
BLI: 201300

SHIP TYPE	SHIPBUILDER	FISCAL YEAR AUTHORIZED	CONTRACT AWARD	START OF CONSTRUCTION	DELIVERY DATE
SSN774	EB/NNS	98	Sep-98	Aug-97	Jun-04
SSN775	EB/NNS	99	Sep-98	Sep-98	Jun-05
SSN776	EB/NNS	01	Sep-98	Oct-99	Dec-06
SSN777	EB/NNS	02	Sep-98	Mar-01	Dec-07
SSN778	EB/NNS	03	Aug-03 *	Sep-02	Apr-09
SSN779	EB/NNS	04	Jan-04	Aug-03	Apr-10
SSN780	EB/NNS	05	Jan-04	Aug-04	Apr-11
SSN781	EB/NNS	06	Jan-04	Aug-05	Apr-12
SSN782	EB/NNS	07	Jan-04	Aug-06	Apr-13
SSN783	EB/NNS	08	Jan-04	Aug-07	Apr-14
SSN784	EB/NNS	09	Oct-08	Aug-08	Apr-15
SSN785	EB/NNS	09	Oct-08	Feb-09	Oct-15

* Note: Contract awarded in August 03 for a six ship block buy starting with SSN 778. The contract transitions to a 5 Ship Multi-Year Procurement starting in FY04 with SSN779.

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P-8B EXHIBIT
FY2005 President's Budget
February 2004
BLI: 201300

SHIPBUILDING AND CONVERSION, NAVY
Analysis of Ship Cost Estimate - Basic/Escalation

Fiscal Year: 2004/2005

Ship Type: VIRGINIA CLASS

I.	<u>Design Schedule:</u>	<u>Start/Issue</u>	<u>Complete/Response</u>	<u>Reissue Complete/Response</u>
	Issue Date for TLR	N/A	N/A	
	Issue Date for TLS	N/A	N/A	
	Preliminary Design	Oct-93	Sep-95	
	Contract Design	Oct-94	Sep-96	
	Detail Design	Jan-96	Jun-04	
	Request for Proposals	N/A	N/A	
	Design Agent	Electric Boat		
II.	<u>Classification of Cost Estimate</u>	C		
III.	<u>Basic Construction/Conversion</u>	<u>FY2004</u>	<u>FY2005</u>	
	A. Award Date	Jan-04	Jan-04	
	B. Contract Type and Share Line	FPIF	FPIF	Multi Year Procurement with EOQ.
	C. Request for Proposals: Start/Issue: Jul 02		Complete/Response: Sept-02	
IV.	<u>Escalation</u>			
	Base Date	N/A	N/A	
	Escalation Target Date	N/A	N/A	
	Escalation Termination Date	N/A	N/A	
	Escalation Requirement (\$K)	N/A	N/A	
	Labor/Material Split	N/A	N/A	
	Allowable Overhead Rate	N/A	N/A	
V.	<u>Other Basic (Reserves/Miscellaneous)</u>	<u>Amount</u>	<u>Amount</u>	
	Item	N/A	N/A	

UNCLASSIFIED
CLASSIFICATION

P-8A EXHIBIT
FY2005 President's Budget
February 2004
BLI: 201300

SHIPBUILDING AND CONVERSION, NAVY
Analysis of Ship Cost Estimates - Major Equipment
(Dollars in Thousands)

Ship Type:														
VIRGINIA CLASS														
	FY 98		FY 99		FY 01		FY 02		FY 03		FY 04		FY 05	
	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
ELECTRONICS EQUIPMENT														
a. P-35 Items														
1. Sonar, Combat Control & Architecture	1	\$122,144	1	\$67,772	1	\$75,444	1	\$76,401	1	\$89,876	1	\$88,246	1	\$88,686
2. ESM *	1	\$17,652	1	\$19,466	1	\$20,538	1	\$21,056	1	\$14,162	1	\$18,896	1	\$19,327
3. Photonics Masts	1	\$25,560	1	\$21,756	1	\$23,458	1	\$25,340	1	\$23,472	1	\$19,756	1	\$19,766
4. UMMs	1	\$14,628	1	\$13,525	1	\$11,883	1	\$10,691	1	\$9,824	1	\$8,109	1	\$8,677
Subtotal		\$179,984		\$122,519		\$131,323		\$133,488		\$137,334		\$135,007		\$136,456
b. Major Items														
1. SRWS*	1	\$4,197	1	\$3,991	1	\$4,100	1	\$4,125	1	\$4,229	1	\$4,349	1	\$4,363
2. System Level Activities	1	\$22,222	1	\$17,372	1	\$22,493	1	\$21,237	1	\$20,687	1	\$16,960	1	\$17,231
3. AN/BPS-16	1	\$3,043	1	\$3,025	1	\$5,190	1	\$5,300	1	\$5,893	1	\$4,993	1	\$5,099
4. Navigation	1	\$3,087	1	\$2,271	1	\$2,363	1	\$2,490	1	\$3,377	1	\$2,864	1	\$2,931
5. AN/UYQ-70	1	\$5,500	1	\$5,891	1	\$6,496	1	\$6,761	1	\$14,809	1	\$11,421	1	\$11,549
6. ECS	1	\$13,844	1	\$11,057	1	\$20,823	1	\$27,769	1	\$6,290	1	\$7,139	1	\$7,313
7. CWITT	1	\$20,044	1	\$15,485	1	\$11,202	1	\$11,622	1	\$14,400	1	\$12,956	1	\$11,751
8. NPES SE&I	1	\$22,138	1	\$14,168	1	\$15,905	1	\$21,036	1	\$16,332	1	\$15,209	1	\$14,037
Subtotal		\$94,075		\$73,260		\$88,572		\$100,340		\$86,017		\$75,891		\$74,274
c. Other Electronics														
1. Misc Electronics		\$460		\$448		\$500		\$514		\$584		\$585		\$590
Subtotal		\$460		\$448		\$500		\$514		\$584		\$585		\$590
TOTAL ELECTRONICS		\$274,519		\$196,227		\$220,395		\$234,342		\$223,935		\$211,483		\$211,320

*The FY03 Towed Array capability under the SCCA subsystems as well as the ESM and SRWS subsystems in this SCN exhibit will require OPN modernization upgrades to be fully capable subsystems.

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35

ITEM: SONAR, COMBAT, CONTROL &
ARCHITECTURE

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The VIRGINIA Class Command, Control, Communications and Intelligence (C3I) System is the electronics suite which will provide required operational and warfighting capability for the Navy's newest attack submarine. The C3I System includes 15 subsystems (23 if all electronically interfaced subsystems are included) integrated by an overarching Architecture Subsystem. This P-35 covers the procurement requirements for the following: C3I Prime Contractor Furnished Equipment (Sonar, Combat Control and Architecture subsystems) and associated Government Furnished Equipment; technical data documentation; spares; technical engineering services; design engineering services; field engineering services; management support services; and shipboard certification efforts. The FY03 Towed Array capability under the SCCA subsystems in this SCN exhibit will require OPN modernization upgrades to be fully capable SCCA subsystems.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05
MAJOR HARDWARE	1	\$57,452	1	\$50,979	1	\$59,363	1	\$60,134	1	\$67,957	1	\$68,321	1	\$68,661
TECH ENGINEERING SERVICES		\$2,735		\$2,755		\$3,131		\$3,217		\$3,872		\$3,892		\$3,912
OTHER COSTS		\$61,957		\$14,038		\$12,950		\$13,050		\$18,047		\$16,033		\$16,113
TOTAL		\$122,144		\$67,772		\$75,444		\$76,401		\$89,876		\$88,246		\$88,686

III. CONTRACT DATA:

PROGRAM		CONTRACTOR	QTY	HARDWARE UNIT COST	CONTRACT AWARD DATE
YEAR	SHIP TYPE				
98	SSN774	LMNESS	1 Shipset	\$41,802	Feb-98
99	SSN775	LMNESS	1 Shipset	\$41,317	May-99
01	SSN776	LMNESS	1 Shipset	\$40,706	Mar-01
02	SSN777	LMNESS	1 Shipset	\$41,728	Mar-02
03	SSN778	LMNESS/Raytheon	1 Shipset	\$57,677	Dec-03
04	SSN779	LMNESS/Raytheon	1 Shipset	\$49,300	Mar-04
05	SSN780	LMNESS/Raytheon	1 Shipset	\$50,000	Mar-05

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	43	32	Mar-98
99	SSN775	Jun-05	38	32	Aug-99
01	SSN776	Dec-06	37	32	Mar-01
02	SSN777	Dec-07	37	32	Mar-02
03	SSN778	Dec-08	37	32	Dec-03
04	SSN779	Dec-09	37	32	Mar-04
05	SSN780	Dec-10	37	32	Mar-05

V. COMPETITION/SECOND SOURCE INITIATIVES:

N/A

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35

ITEM: ELECTRONIC SUPPORT MEASURES SUBSYSTEM

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The VIRGINIA Class Command, Control, Communications and Intelligence (C3I) System is the electronics suite which will provide required operational and warfighting capability for the Navy's newest attack submarine. The C3I System includes 15 subsystems (23 if all electronically interfaced subsystems are included) integrated by an overarching Architecture Subsystem. This P-35 covers the procurement requirements for the following: Electronic Support Measures subsystem Prime Contractor Furnished Equipment, and associated Government Furnished Equipment; technical data documentation; spares; systems engineering; technical engineering services; computer program support; system test & evaluation; field engineering services; management support services; shipboard certification efforts; quality assurance and reliability/maintainability assurance; maintenance of technical data; and contractor support services efforts. This system provides the capability to process a variety of electromagnetic signal types over a wide frequency range in support of all applicable submarine mission areas. The FY03-04 ESM subsystems in this SCN exhibit will require OPN modernization upgrades to be fully capable ESM subsystems.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05
MAJOR HARDWARE	1	\$13,834	1	\$13,085	1	\$14,501	1	\$14,826	1	\$9,898	1	\$13,207	1	\$13,506
TECH ENGINEERING SERVICES		\$1,797		\$1,010		\$1,053		\$1,113		\$750		\$1,002		\$1,025
OTHER COSTS		\$2,021		\$5,371		\$4,984		\$5,117		\$3,514		\$4,687		\$4,796
TOTAL		\$17,652		\$19,466		\$20,538		\$21,056		\$14,162		\$18,896		\$19,327

III. CONTRACT DATA:

PROGRAM				HARDWARE	CONTRACT
YEAR	SHIP TYPE	CONTRACTOR	QTY	UNIT COST	AWARD DATE
98	SSN774	LM, Syracuse	1 Shipset	\$13,834	Aug-00
99	SSN775	LM, Syracuse	1 Shipset	\$13,085	Aug-00
01	SSN776	LM, Syracuse	1 Shipset	\$14,501	Nov-01
02	SSN777	LM, Syracuse	1 Shipset	\$14,826	Nov-02
03	SSN778	LM, Syracuse	1 Shipset	\$9,898	Feb-03
04	SSN779	LM, Syracuse	1 Shipset	\$13,207	Nov-04
05	SSN780	LM, Syracuse	1 Shipset	\$13,506	Nov-05

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	43	18	May-99
99	SSN775	Jun-05	38	18	Oct-00
01	SSN776	Dec-06	37	18	May-02
02	SSN777	Dec-07	37	18	May-03
03	SSN778	Dec-08	37	18	May-04
04	SSN779	Dec-09	37	18	May-05
05	SSN780	Dec-10	37	18	May-06

V. COMPETITION/SECOND SOURCE INITIATIVES:

N/A

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35
ITEM: PHOTONICS MAST

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The VIRGINIA Class Command, Control, Communications and Intelligence (C3I) System is the electronics suite which will provide required operational and warfighting capability for the Navy's newest attack submarine. The C3I System includes 15 subsystems (23 if all electronically interfaced subsystems are included) integrated by an overarching Architecture Subsystem. This P-35 covers the procurement requirements for the following: Photonics subsystem Prime Contractor Furnished Equipment; spares; systems engineering; technical engineering services; computer program support; field engineering services; management support services; shipboard certification; maintenance of technical data; and contractor support services efforts. This system consists of two outboard mast/antenna/camera assemblies and the associated inboard processing and display equipment. This system supports visual and infrared (IR) imaging, RF signal communications, early warning and contact direction finding capability.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05
MAJOR HARDWARE	1	\$23,932	1	\$18,340	1	\$18,342	1	\$17,567	1	\$18,899	1	\$16,054	1	\$15,554
TECH ENGINEERING SERVICES		\$726		\$448		\$505		\$516		\$623		\$519		\$520
OTHER COSTS		\$902		\$2,968		\$4,611		\$7,257		\$3,950		\$3,183		\$3,692
TOTAL		\$25,560		\$21,756		\$23,458		\$25,340		\$23,472		\$19,756		\$19,766

III. CONTRACT DATA:

PROGRAM				HARDWARE	CONTRACT
YEAR	SHIP TYPE	CONTRACTOR	QTY	UNIT COST	AWARD DATE
98	SSN774	Kollmorgen	1 Shipset	\$23,932	Jan-98
99	SSN775	Kollmorgen	1 Shipset	\$18,340	Dec-99
01	SSN776	Kollmorgen	1 Shipset	\$18,342	Sep-01
02	SSN777	Kollmorgen	1 Shipset	\$17,567	Sep-02
03	SSN778	Kollmorgen	1 Shipset	\$18,899	Jan-04
04	SSN779	Kollmorgen	1 Shipset	\$16,054	Sep-04
05	SSN780	Kollmorgen	1 Shipset	\$15,554	Sep-05

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	43	24	Nov-98
99	SSN775	Jun-05	38	24	Apr-00
01	SSN776	Dec-06	37	24	Nov-01
02	SSN777	Dec-07	37	24	Nov-02
03	SSN778	Dec-08	37	24	Jan-04
04	SSN779	Dec-09	37	24	Nov-04
05	SSN780	Dec-10	37	24	Nov-05

V. COMPETITION/SECOND SOURCE INITIATIVES:

N/A

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35

ITEM: UNIVERSAL MODULAR MAST

EXHIBIT P-35

FY2005 President's Budget

February 2004

BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The VIRGINIA Class Command, Control, Communications and Intelligence (C3I) System is the electronics suite which will provide required operational and warfighting capability for the Navy's newest attack submarine. The C3I System includes 15 subsystems (23 if all electronically interfaced subsystems are included) integrated by an overarching Architecture Subsystem. This P-35 covers the procurement requirements for the following: Modular Mast Prime Contractor Furnished Equipment; technical data documentation; spares; systems engineering; technical engineering services; management support services; shipboard certification; and maintenance of technical data efforts. This system consists of eight common masts for purposes of housing, raising and lowering antenna and other sensor units.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05
MAJOR HARDWARE	1	\$9,865	1	\$9,711	1	\$7,136	1	\$6,800	1	\$6,922	1	\$5,867	1	\$6,393
TECH ENGINEERING SERVICES		\$1,180		\$1,428		\$2,085		\$1,600		\$1,052		\$891		\$908
OTHER COSTS		\$3,583		\$2,386		\$2,662		\$2,291		\$1,850		\$1,351		\$1,376
TOTAL		\$14,628		\$13,525		\$11,883		\$10,691		\$9,824		\$8,109		\$8,677

III. CONTRACT DATA:

PROGRAM				HARDWARE	CONTRACT
YEAR	SHIP TYPE	CONTRACTOR	QTY	UNIT COST	AWARD DATE
98	SSN774	Kollmorgen	1 Shipset	\$9,865	Apr-99
99	SSN775	Kollmorgen	1 Shipset	\$9,711	Apr-99
01	SSN776	Kollmorgen	1 Shipset	\$7,136	Jul-00
02	SSN777	Kollmorgen	1 Shipset	\$6,800	Oct-02
03	SSN778	Kollmorgen	1 Shipset	\$6,922	Jan-03
04	SSN779	Kollmorgen	1 Shipset	\$5,867	Jan-04
05	SSN780	Kollmorgen	1 Shipset	\$6,393	Jan-05

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIPDELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	32	27	Jul-99
99	SSN775	Jun-05	41	27	Oct-99
01	SSN776	Dec-06	41	27	Apr-01
02	SSN777	Dec-07	41	27	Oct-02
03	SSN778	Dec-08	41	27	Apr-03
04	SSN779	Dec-09	41	27	Apr-04
05	SSN780	Dec-10	41	27	Apr-05

V. COMPETITION/SECOND SOURCE INITIATIVES:

N/A

UNCLASSIFIED
CLASSIFICATION

P-8A EXHIBIT
FY2005 President's Budget
February 2004
BLI: 201300

SHIPBUILDING AND CONVERSION, NAVY
Analysis of Ship Cost Estimates - Major Equipment
(Dollars in Thousands)

Ship Type: VIRGINIA CLASS		FY 98		FY 99		FY01		FY02		FY03		FY04		FY05	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
HM&E EQUIPMENT															
a. P-35 Items															
1. MPC		1	\$73,117	1	\$140,770	1	\$132,505	1	\$139,302	1	CFE	1	CFE	1	CFE
2. Propulsor *		1	\$43,559	1	\$31,898	1	\$29,494	1	\$31,928	1	\$31,497	1	\$37,370	1	\$4,640
3. Main Condensers		1	\$25,090	1	\$7,875		CFE		CFE		CFE		CFE		CFE
Subtotal			\$141,766		\$180,543		\$161,999		\$171,230		\$31,497		\$37,370		\$4,640
b. Major Items															
1. Heat Exchanger		1	\$12,362	1	\$5,333		CFE		CFE		CFE		CFE		CFE
2. Switchboard Elec		1	\$12,803	1	\$8,000		CFE		CFE		CFE		CFE		CFE
3. VLS PSE		1	\$9,206	1	\$7,197		CFE		CFE		CFE		CFE		CFE
4. MSW Pumps		1	\$13,260	1	\$4,616		CFE		CFE		CFE		CFE		CFE
5. H&B Valves		1	\$16,547	1	\$4,746		CFE		CFE		CFE		CFE		CFE
6. MF&C Pumps		1	\$4,459	1	\$2,549		CFE		CFE		CFE		CFE		CFE
7. ASW Pumps		1	\$4,785	1	\$2,862		CFE		CFE		CFE		CFE		CFE
8. CSA MK2		1	\$1,696	1	\$1,444	1	\$1,234	1	\$1,134	1	\$1,157	1	\$1,178	1	\$1,184
Subtotal			\$75,118		\$36,747		\$1,234		\$1,134		\$1,157		\$1,178		\$1,184
c. Other															
1. HM&E Installation and testing			\$12,486		\$4,049		\$4,304		\$6,541		\$4,283		\$7,626		\$7,786
2. T&E			\$3,202		\$5,512		\$4,286		\$4,125		\$1,052		\$5,424		\$5,569
3. SUPSHIP responsible material			\$1,000		\$1,000		\$1,000		\$1,000		\$832		\$1,000		\$1,000
Subtotal			\$16,688		\$10,561		\$9,590		\$11,666		\$6,167		\$14,050		\$14,355
TOTAL HM&E			\$233,572		\$227,851		\$172,823		\$184,030		\$38,821		\$52,598		\$20,179

*The FY05 / SSN780 Propulsor will be utilized from a Seawolf Spare. Balance provides GFE support.

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35
ITEM: MAIN PROPULSION COMPLEX

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The Main Propulsion Complex (MPC) consists of the Main Propulsion Unit (MPU) and the Ship Service Turbine Generators (SSTG). The MPU consists of port and starboard turbines, reduction gears, thrust bearings and clutches mounted on a cast base. The MPU also includes an emergency propulsion motor and clutch. The purpose of the MPU is to utilize steam produced by the propulsion plant to propel the ship through the water via an arrangement of gearing and shafting. The SSTG is the main source of electric power for shipboard use. Interchangeable port and starboard SSTG units are steam driven and integrated with the main condensers which serve to recycle the steam in the secondary system.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05
MAJOR HARDWARE	1	61,629	1	134,940	1	126,371	1	132,974	1	0	1	0	1	0
SYSTEMS ENGINEERING		11,208		4,736		4,737		5,027		0		0		0
TECH ENGINEERING SERVICES		280		1,094		1,397		1,301		0		0		0
OTHER COSTS		0		0		0		0		0		0		0
TOTAL		73,117		140,770		132,505		139,302		0		0		0

III. CONTRACT DATA:

PROGRAM					HARDWARE	CONTRACT
YEAR	SHIP TYPE	CONTRACTOR	QTY		UNIT COST	AWARD DATE
98	SSN774	EBCorp	1 Shipset		61,629	Sep-94
99	SSN775	EBCorp	1 Shipset		134,940	Nov-97
01	SSN776	EBCorp	1 Shipset		126,371	Dec-98
02	SSN777	EBCorp	1 Shipset		132,974	Jul-00
03	SSN778	EBCorp	1 Shipset		0	CFE
04	SSN779	EBCorp	1 Shipset		0	CFE
05	SSN780	EBCorp	1 Shipset		0	CFE

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DAT	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	45	46	Nov-96
99	SSN775	Jun-05	45	46	Nov-97
01	SSN776	Dec-06	45	46	May-99
02	SSN777	Dec-07	45	46	Nov-01
03	SSN778	Dec-08	45	46	CFE
04	SSN779	Dec-09	45	46	CFE
05	SSN780	Dec-10	45	46	CFE

V. COMPETITION/SECOND SOURCE INITIATIVES:

N/A

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35
ITEM: PROPULSOR

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

The propulsor consists of Ni-Al-bronze blades and a large steel and inconel fabrication piece. The purpose of the propulsor is to generate proper thrust to propel the ship at a rated speed within the approved limits of torque and shaft RPM, while at the same time meeting acoustic and structural requirements. This design is unique to the VIRGINIA Class. The propulsor consists of a large quantity of government supplied material and a contract for the fixed portion construction and assembly.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99	QTY	FY01	QTY	FY02	QTY	FY03	QTY	FY04	QTY	FY05 *
MAJOR HARDWARE	1	43,559	1	26,782	1	24,578	1	28,435	1	29,114	1	32,930	1	0
TECH ENGINEERING SERVICES		0		5,116		4,916		3,493		2,383		4,440		4,640
OTHER COSTS		0		0		0								
TOTAL		43,559		31,898		29,494		31,928		31,497		37,370		4,640

III. CONTRACT DATA:

PROGRAM	QTY	HARDWARE	CONTRACT	
YEAR SHIP TYPE	1 Shipset	UNIT COST	AWARD DATE	
98 SSN774	United Defense	1 Shipset	20,619	Dec-98
99 SSN775	United Defense	1 Shipset	12,727	Dec-98
01 SSN776	United Defense	1 Shipset	12,440	Dec-98
02 SSN777	United Defense	1 Shipset	15,131	Dec-98
03 SSN778	United Defense	1 Shipset	15,238	Feb-02
04 SSN779	United Defense	1 Shipset	15,915	Aug-03
05 SSN780	*The FY05 / SSN780 Propulsor will be utilized from a Virginia / Seawolf Spare. Balance provides GFE support.			

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	26	36	Apr-99
99	SSN775	Jun-05	26	36	Apr-00
01	SSN776	Dec-06	26	36	Oct-01
02	SSN777	Dec-07	26	36	Oct-02
03	SSN778	Dec-08	26	36	Oct-03
04	SSN779	Dec-09	26	36	Oct-04
05	SSN780	Dec-10	26	36	Oct-05

V. COMPETITION/SECOND SOURCE INITIATIVES:
N/A

SHIPBUILDING AND CONVERSION, NAVY
MAJOR SHIP COMPONENT FACT SHEET

P-35
ITEM: MAIN CONDENSER

EXHIBIT P-35
FY2005 President's Budget
February 2004
BLI: 201300

I. DESCRIPTION/CHARACTERISTICS/PURPOSE

A heat exchanger, that serves to condense exhaust steam from main and SSTG turbines, producing fresh water, which is returned to the feed water system to supply the steam generators to produce steam.

II. CURRENT FUNDING:

SHIP:	QTY	FY98	QTY	FY99
MAJOR HARDWARE	1	21,030	1	6,570
TECH ENGINEERING SERVICES		2,516		809
OTHER COSTS		1,544		496
TOTAL		25,090		7,875

III. CONTRACT DATA:

PROGRAM	SHIP TYPE	CONTRACTOR	QTY	HARDWARE UNIT COST
YEAR				
98	SSN774	Electric Boat	1 Shipset	21,030
99	SSN775	Electric Boat	1 Shipset	6,570

IV. DELIVERY DATA:

FY	SHIP TYPE	EARLIEST SHIP DELIVERY DATE	MONTHS REQUIRED BEFORE DELIVERY	PRODUCTION LEAD TIME	REQUIRED AWARD DATE
98	SSN774	Jun-04	36	66	Jan-96
99	SSN775	Jun-05	36	66	Dec-97

V. COMPETITION/SECOND SOURCE INITIATIVES:
N/A